

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Amendment of Parts 22, 90, and 94 of)
the Commission's Rules to permit)
Routine Use of Signal Boosters)

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WT Docket No. 95-70
RM-8200

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TO: The Commission

COMMENTS OF UTC

Pursuant to Section 1.415 of the Commission's Rules, UTC, The Telecommunications Association (UTC),¹ hereby submits its Comments on the Notice of Proposed Rule Making (NPRM), FCC 95-204, released June 22, 1995, in the above-captioned proceeding.

UTC is the national representative on communications matters for the nation's electric, gas, and water utilities and natural gas pipelines. Approximately 2,000 utilities and pipelines are members of UTC, ranging in size from small rural electric cooperatives and water districts serving only a few thousand consumers, to large, combination electric-gas-water utilities serving millions of consumers. All utilities and pipelines rely on communications facilities to carry out their public service obligations, and virtually all

¹ UTC, The Telecommunications Association, was formerly known as the Utilities Telecommunications Council.

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utilities and pipelines operate private land mobile and/or private microwave facilities to meet their communications requirements.

UTC participated in earlier phases of this proceeding, filing Comments in general support of the petition for rulemaking (RM-8200) filed by TX RX Systems. UTC expressed concerns with the potential for boosters to expand coverage areas or to increase the potential for interference. UTC recommended certain restrictions on the deployment of boosters and on minimal licensing requirements to aid in controlling interference from the use of boosters.

The FCC is now proposing to adopt rules that would permit the use of signal boosters in connection with any Part 22 common carrier paging operation in the 931-932 MHz band, Part 90 land mobile radio operations in bands above 150 MHz, Part 90 paging operations at 929-930 MHz, and Part 94 multiple address systems (MAS) in the 928-960 MHz band. Output power would be restricted to 500 milliwatts for Class A narrowband boosters. Output power for Class B broadband boosters would be limited to the total output power (500 milliwatts) divided by the number of channels amplified. Separate licenses would not be required to operate signal boosters. Boosters could not be used to extend a system's coverage area, and could only be used to fill in weak signal areas.

UTC generally supports the FCC's proposals for the authorization of signal boosters. These devices would significantly enhance utility and pipeline operations by

providing improved signal coverage to areas that are often blocked by terrain or other RF barriers. For example, boosters would allow coverage in fossil fuel electric generating plants; hydro-electric power plants; nuclear power plants; tunnels; open pit coal mines; canyons; valleys; and subterranean facilities.² Signal boosters will allow licensees to achieve fill-in coverage in these critical areas for only a small fraction of the infrastructure cost of a complete base station or repeater site.

UTC questions, however, the proposed power limits for signal boosters. As proposed, per channel output power on a broadband unit is “the total output power (500 mw) divided by the number of channels amplified.” UTC understands that signal boosters from various manufacturers have aggregate power outputs that range from 1 watt to 2.5 watts. If aggregate power is limited to 500 mw, UTC is concerned that the power available per channel will be insufficient when the licensee needs to amplify multiple channels. For example, under the rule as proposed, the licensee of a 5-channel trunked mobile radio system would be restricted to only 100 mw output power on each of the channels amplified.³ These limits could unnecessarily constrain the usefulness of broadband amplifiers.

² Signal boosters would be helpful in meeting regulations of the Occupational Safety and Health Administration (OSHA) which, among other things, require means of communications between employees in “confined spaces” (e.g., manholes, mines, tanks, etc.) and other employees outside the confined space. See 58 Fed. Reg. 4462 (January 14, 1993).

³ UTC notes that Class B (broadband) boosters are proposed for use in MAS systems licensed under Part 94, but that the proposed rules do not differentiate between Class A or Class B boosters with respect to output power. The FCC should clarify whether different power limits apply in the case of MAS operations.

Similarly, the limit of 500 mw for a narrowband (Class A) booster “under all conditions” could be an arbitrary restriction, particularly when the device is located in an RF controlled environment; e.g., in tunnels, mines, power plants, etc. UTC looks forward to reviewing the comments of the manufacturers of signal boosters to determine whether the proposed limits are adequate for most operations, and if not, whether there is a better way of expressing power limits for these devices.⁴

In its comments on the TX RX petition for rulemaking, UTC recommended some form of licensing for both Class A and Class B signal boosters. UTC continues to have reservations concerning the interference potential of boosters if allowed to be deployed on a virtually uncontrolled basis. Although boosters could not be used to extend a licensee’s authorized coverage area, a booster (particularly a Class B booster) could unintentionally expand the authorized coverage area of another licensee whose signal is received by the booster. Without some means of identifying the owner/operator of the booster, enforcement of the non-interference condition could be difficult. UTC therefore recommends two possible conditions, short of licensing, that would help in identifying and eliminating any interference that might be caused by a signal booster. First, each booster device should be marked with a conspicuous label that would allow the reader to identify the owner of the device; e.g., name and telephone number of the licensee and/or call sign of the primary station(s) being amplified. Second, each licensee which deploys

⁴ UTC would suggest, for example, that to the extent there is a concern with generally increasing the proposed power limits, higher power levels should be permitted when boosters are used in a controlled environment; e.g., in tunnels, power plants, mines, buildings, etc.

a signal booster should be required to maintain, as part of its license records for the primary station, a list of the locations of all boosters associated with that station. Location information could be by geographic coordinates or street address. This information should be made available to the FCC staff or relevant frequency coordinators upon request in the case of interference complaints.

Although the FCC is not proposing specific rules regarding authorization of booster/translators, which require separate input/output frequencies, the FCC has requested comment on authorizing their use to provide better coverage within a licensee's existing service area. UTC agrees that signal boosters are generally preferable for fill-in coverage, but notes that booster/translators are effective in some situations. UTC therefore urges the FCC to adopt specific procedures for the licensing of such devices when appropriate.

Conclusion

UTC generally supports the FCC's proposal to authorize the use of signal boosters in the Part 90 land mobile bands above 150 MHz and in connection with Part 94 multiple address systems operating in the 928-960 MHz band. UTC urges the FCC to review the proposed power limits, particularly those proposed for broadband (Class B) devices. As an alternative to licensing of each booster device, UTC recommends a requirement that each device be identified by a label showing, for example, the call sign of the associated

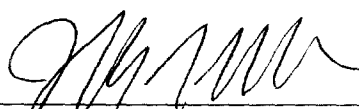
primary station, and that each licensee deploying boosters be required to maintain a list of the locations of all boosters to aid in resolving interference complaints.

WHEREFORE, THE PREMISES CONSIDERED, UTC respectfully requests the FCC to take action in this docket consistent with the views expressed herein.

Respectfully submitted,

UTC, The Telecommunications Association

By:



Jeffrey L. Sheldon
General Counsel

UTC
1140 Connecticut Ave., NW
Suite 1140
Washington, DC 20036
(202) 872-0030

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